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CELL/OTD 004300

☐ Intro

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WITT

WITT Website Demonstration

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WITT

Effective Tools - WITT Web Site

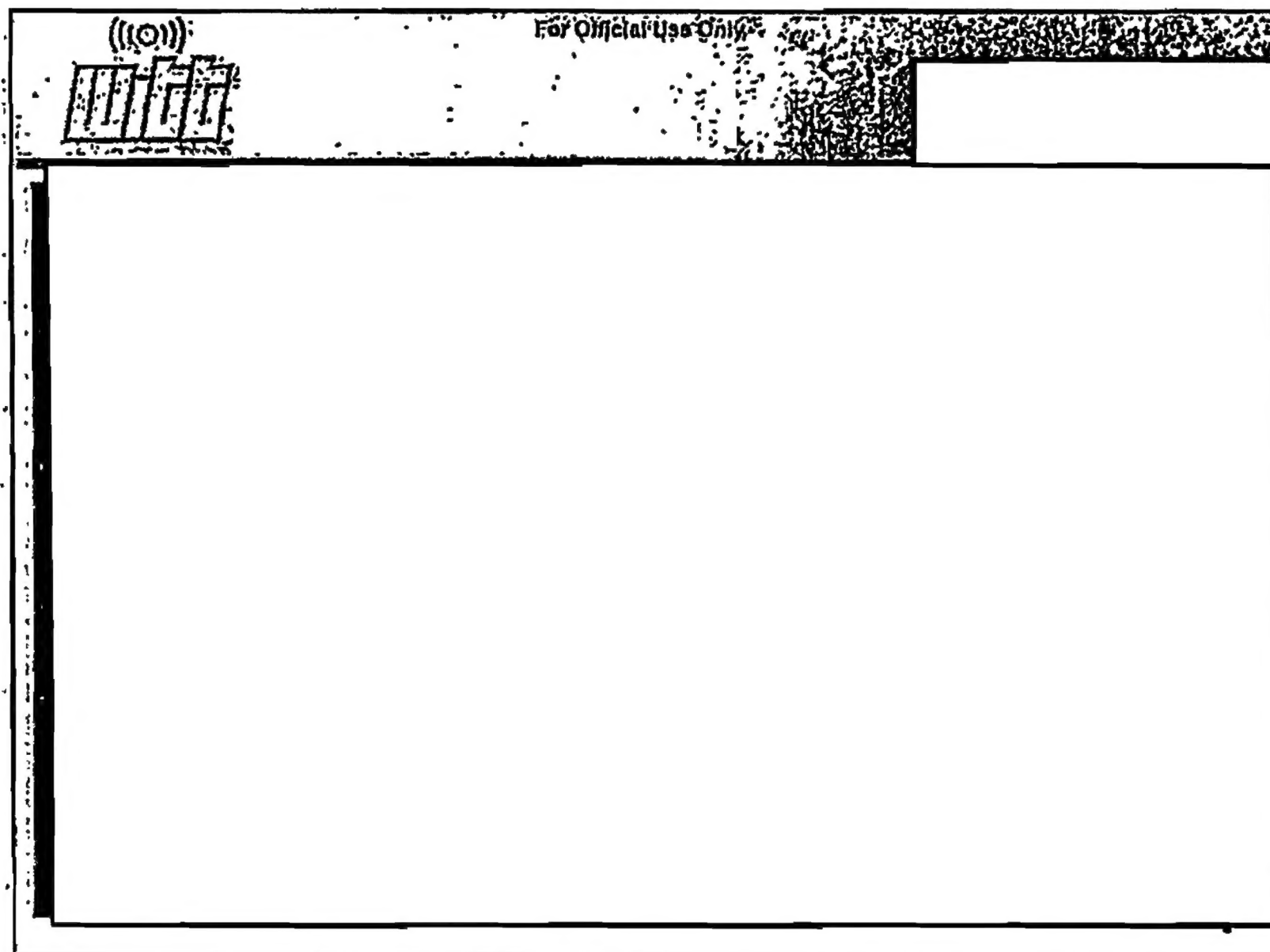
- PURPOSE: To provide information, interactive media [Redacted] WITT
- ACCESS [Redacted]
- URL: [Redacted]
- NETWORK CLASSIFICATION: Secret

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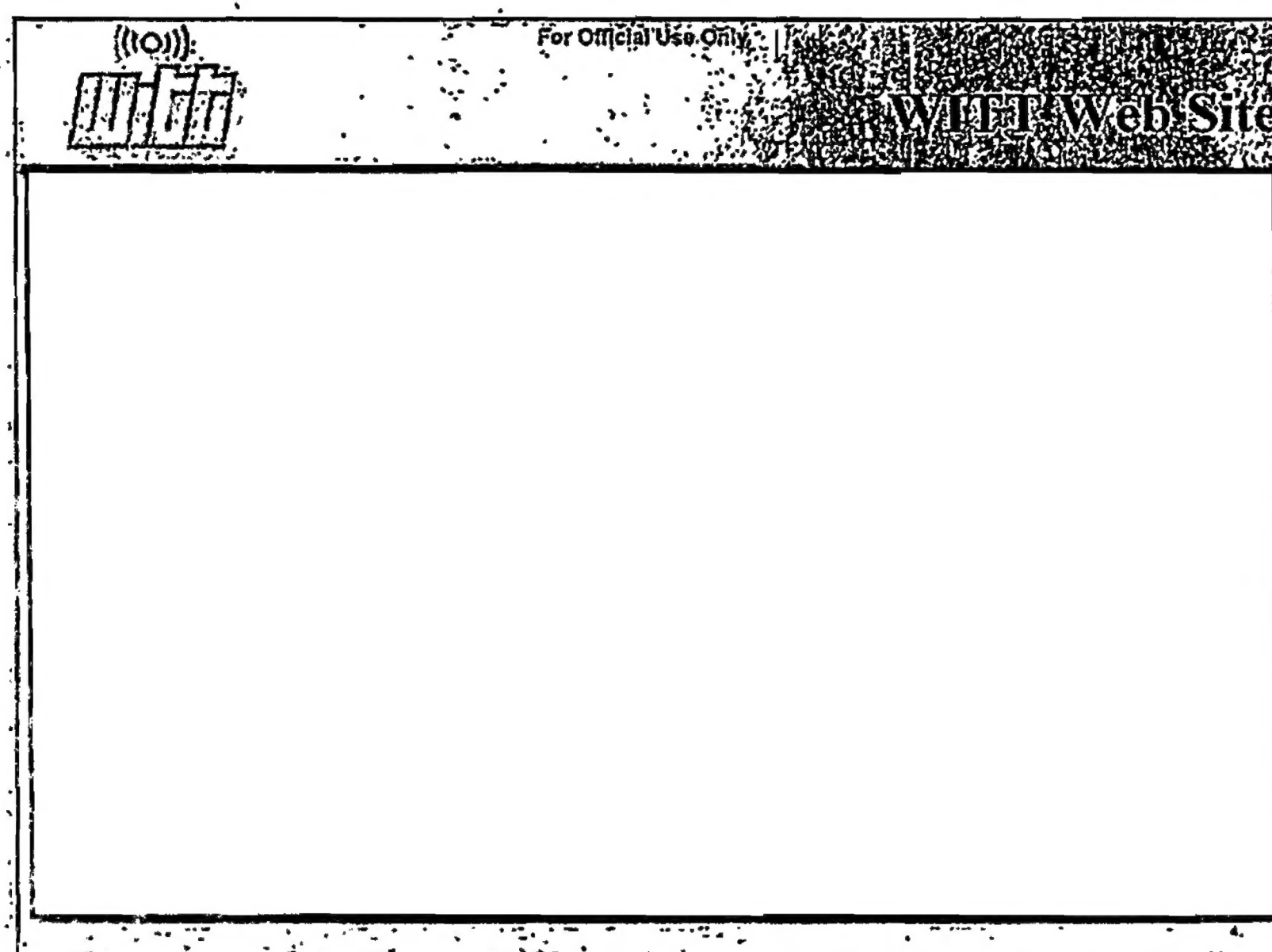
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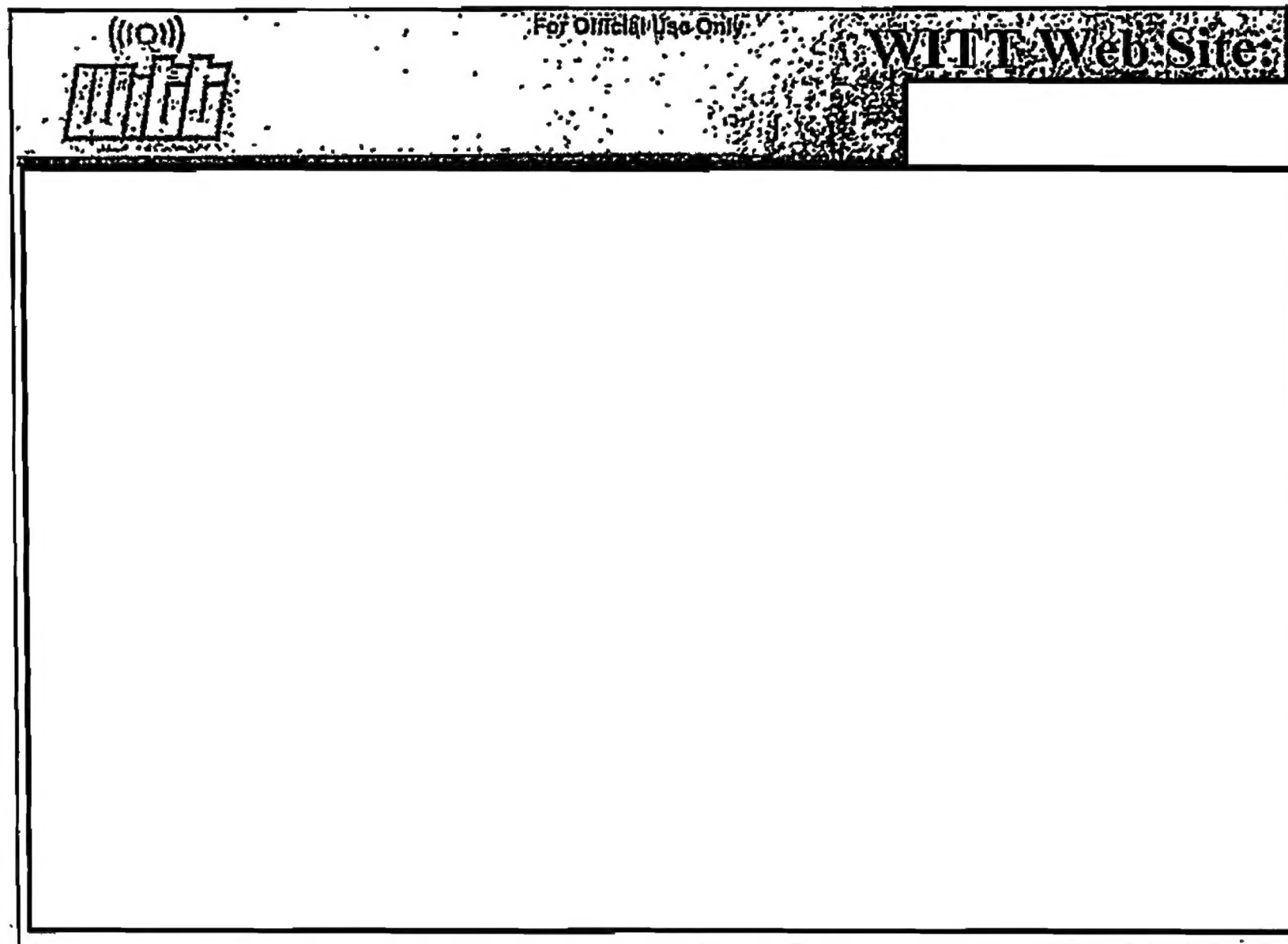


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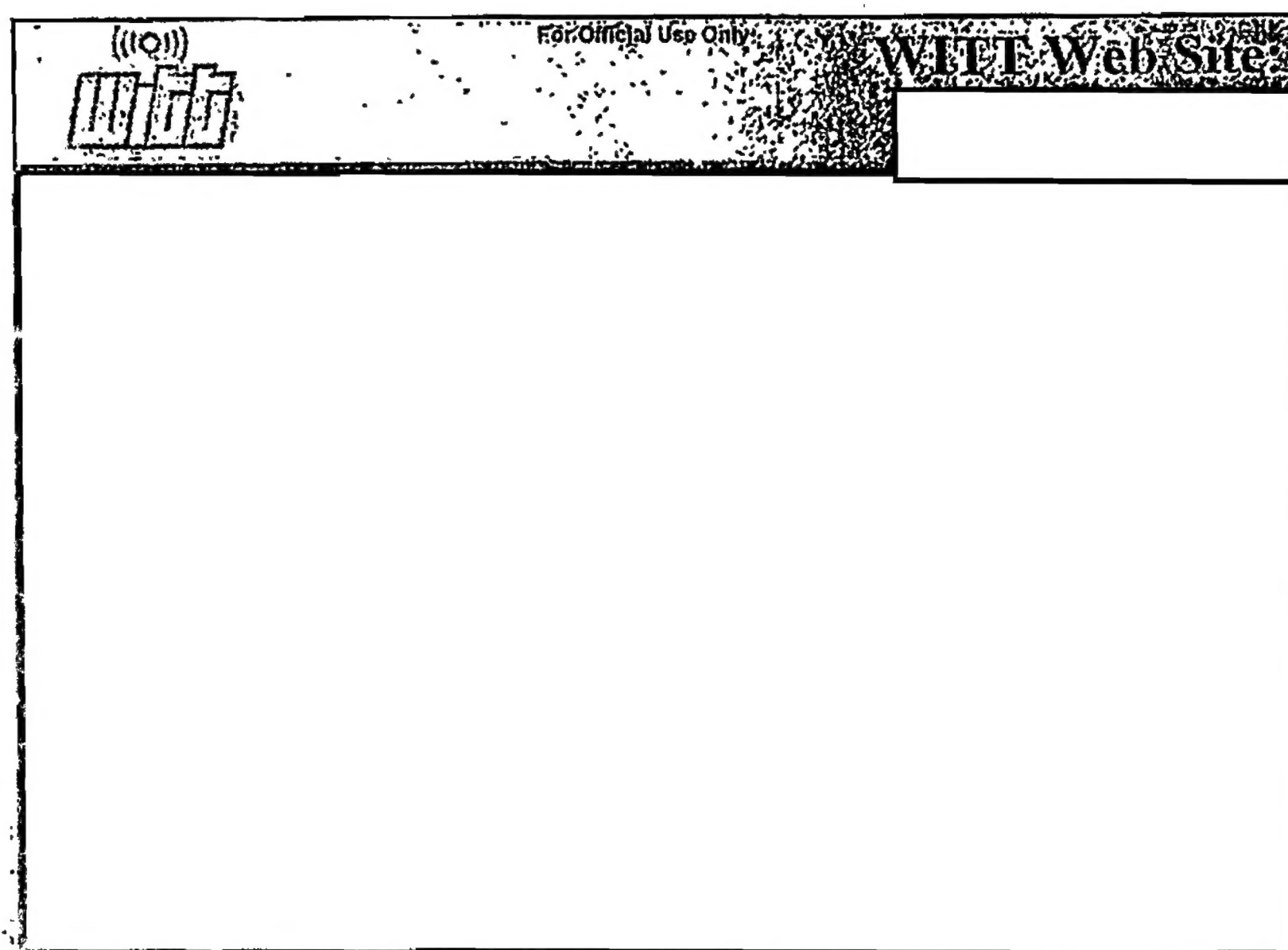


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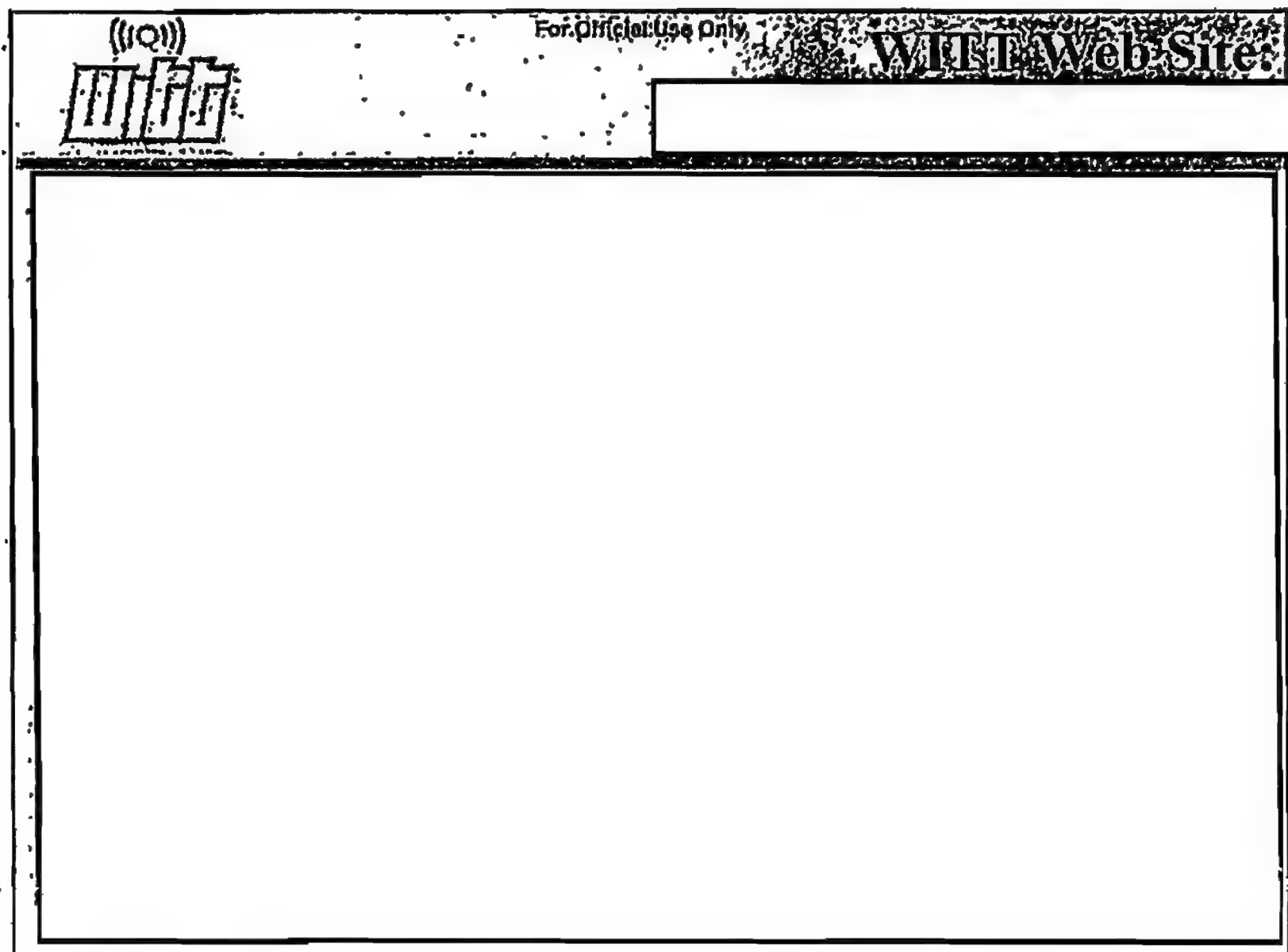
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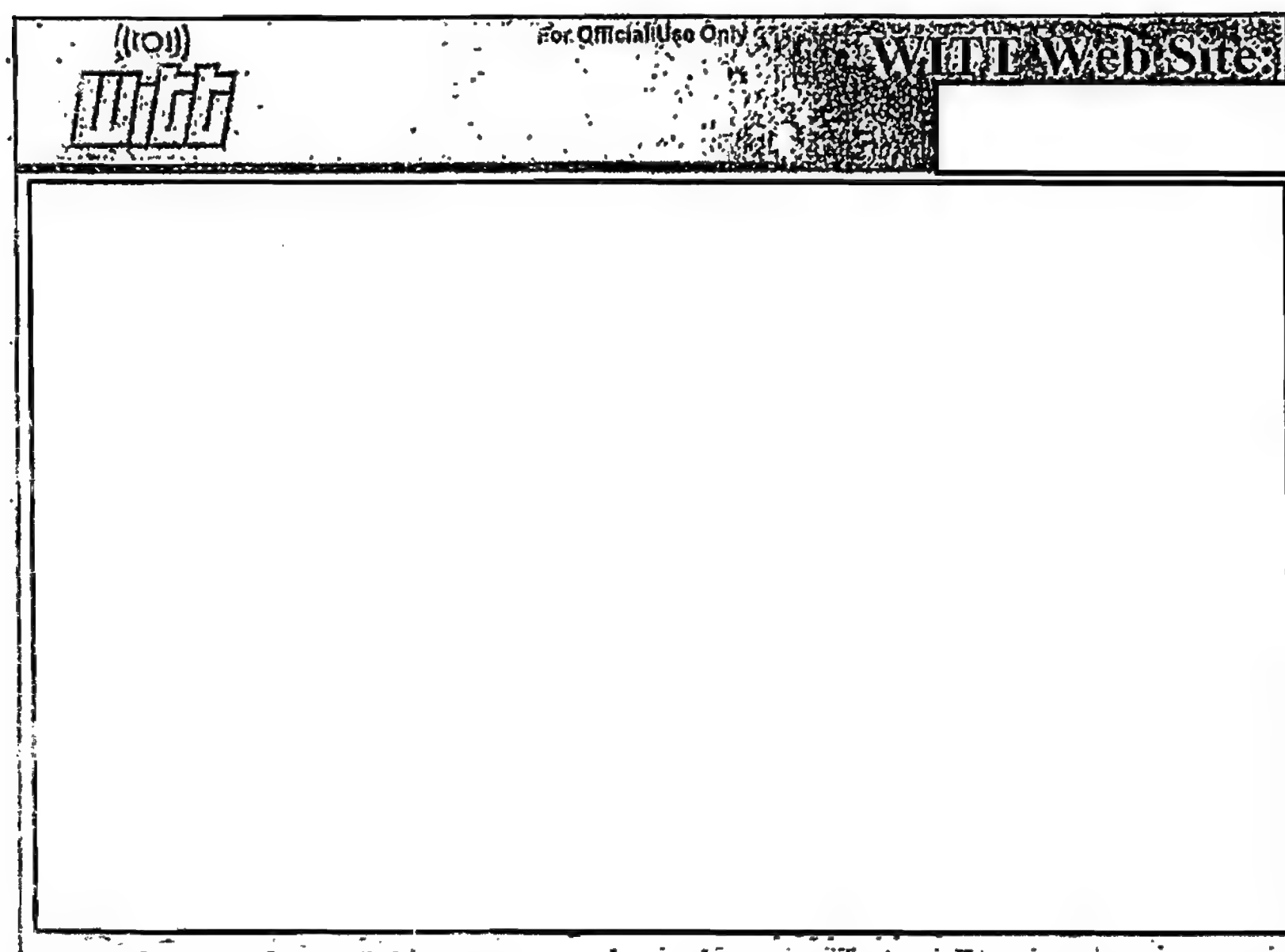
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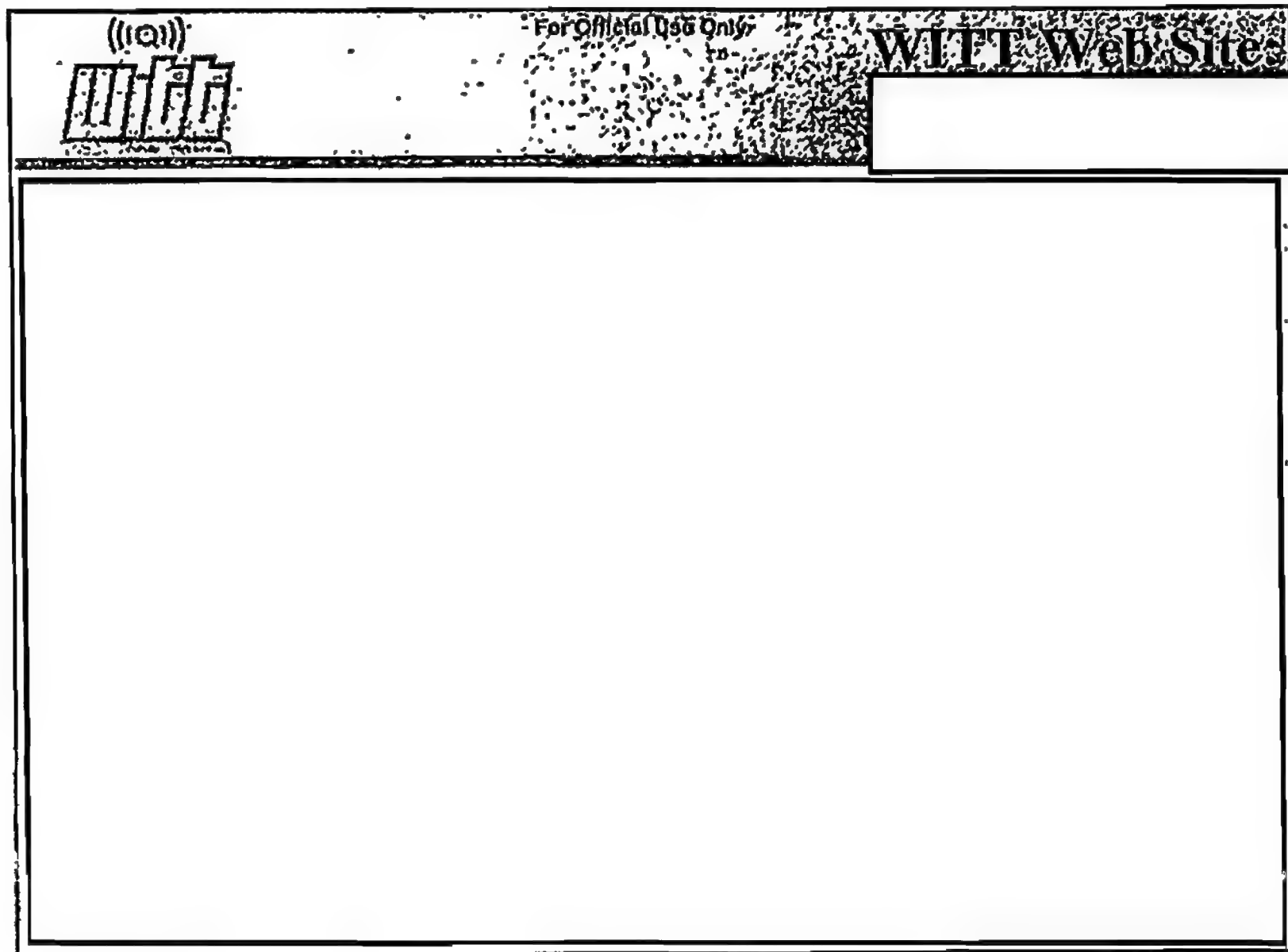


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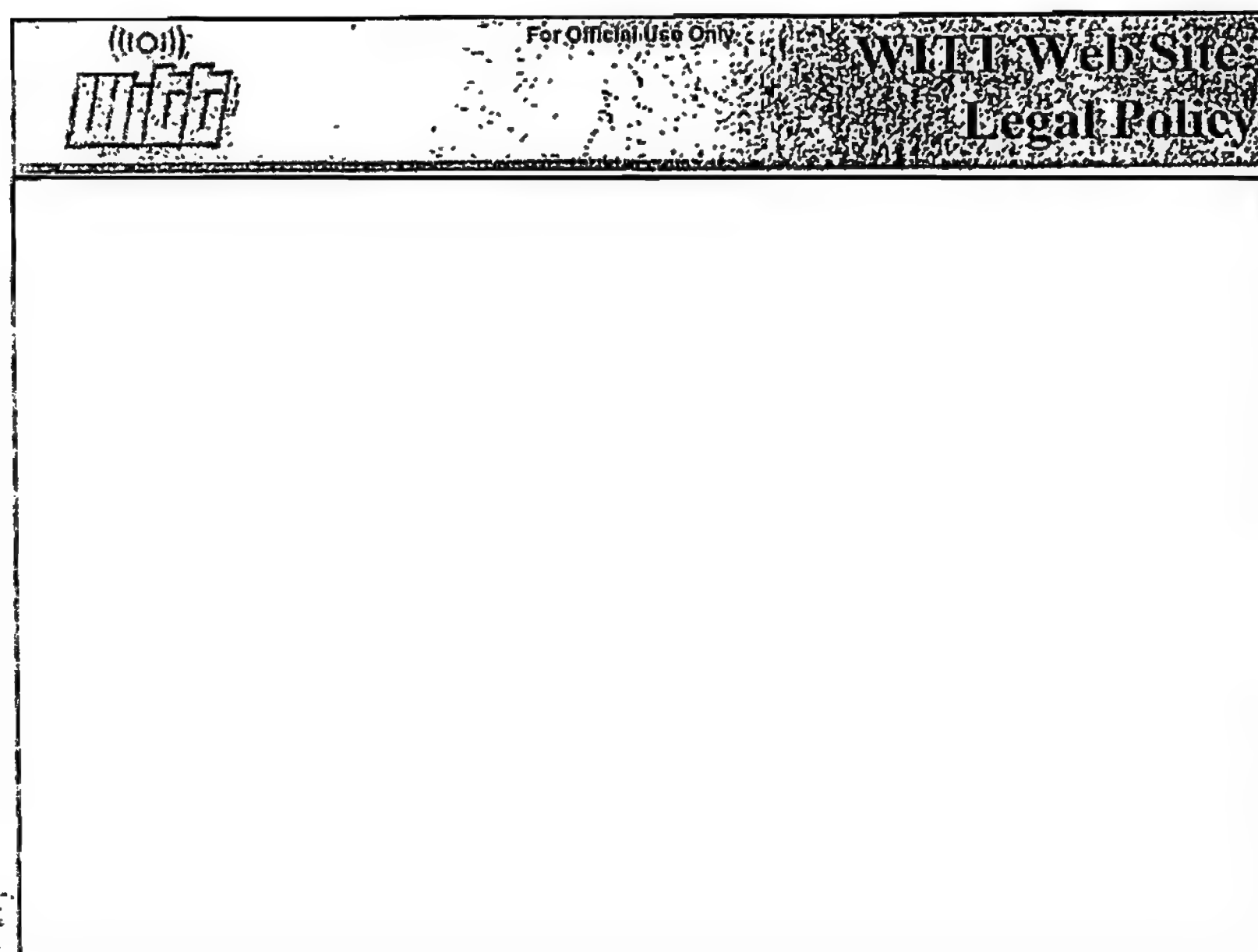


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CONOPS

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Surveillance Players

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5 Scenarios

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Scenario 1

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Scenario 1

Scenario 1

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Scenario 2

Scenario 2

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Scenario 2

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Scenario 3

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	Scenario 3	

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	Scenario 4	

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Scenario 4

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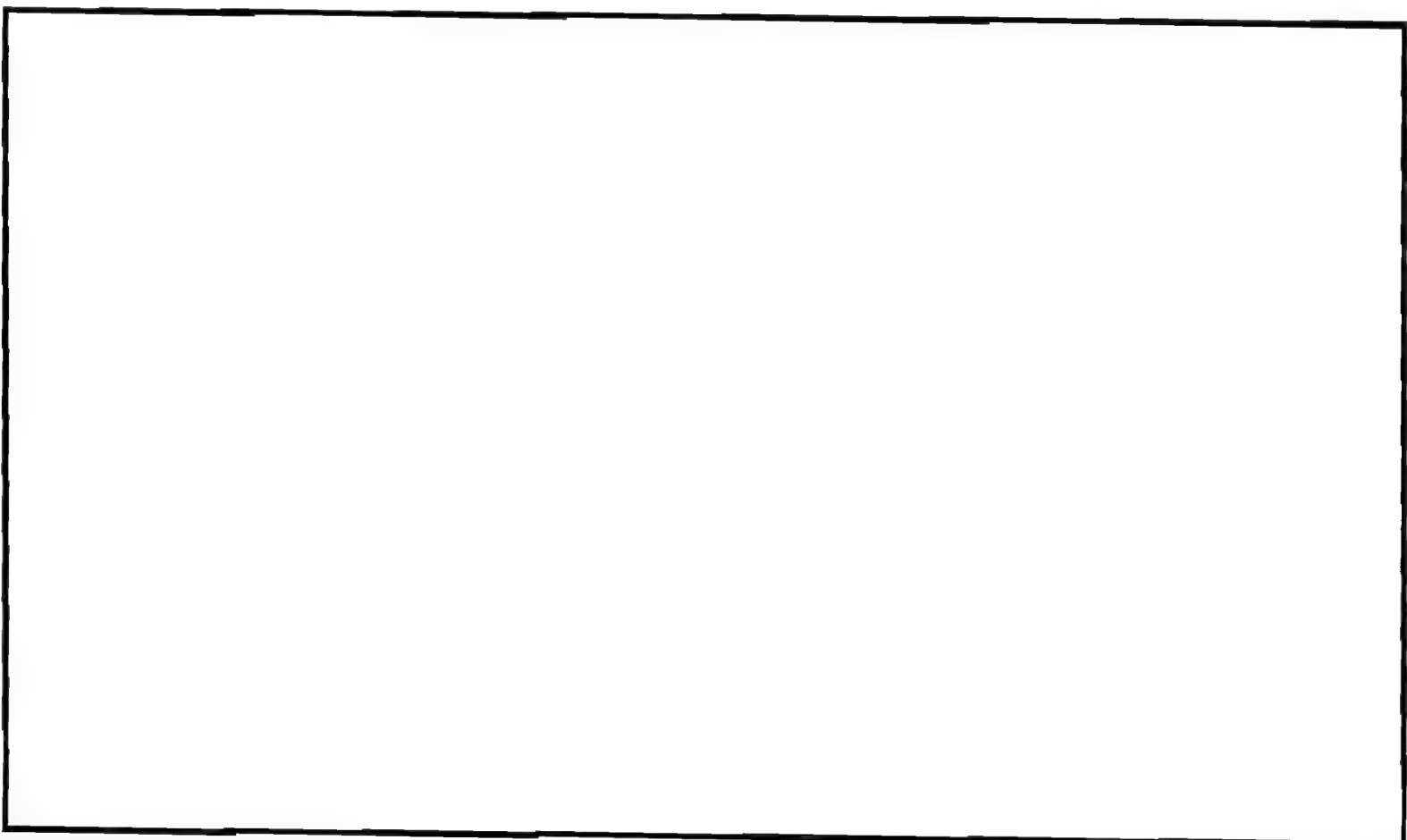
Scenario 5 - GALEA Surveillance

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Scenario 5 - CALFA Surveillance



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Legal

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Legal Guidelines

- Legal considerations await the OGC's review, analysis, and approval
- Additional Legal and Policy issues being identified
- Updates and reference material will be posted on the WITT web site
- Any specific legal question, guidance, or advice should be referred to your CDC and/or to the OGC

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Preliminary Issues

- Pen Registers
- Title III
- Search Warrants
- Disclosure and Evidentiary Considerations
- Safety Issues [REDACTED]
- [REDACTED]

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Introduction to the Mobile Phone Systems

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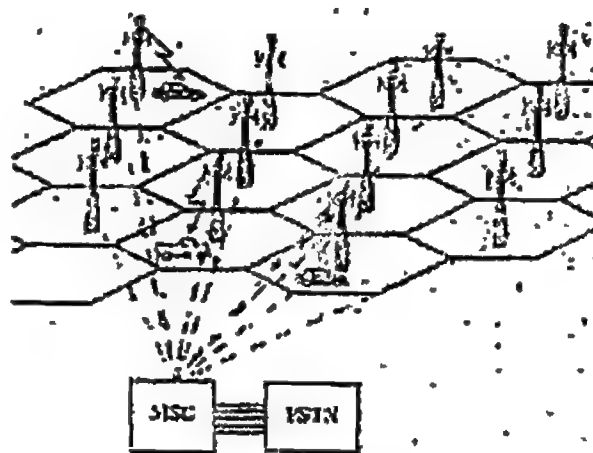
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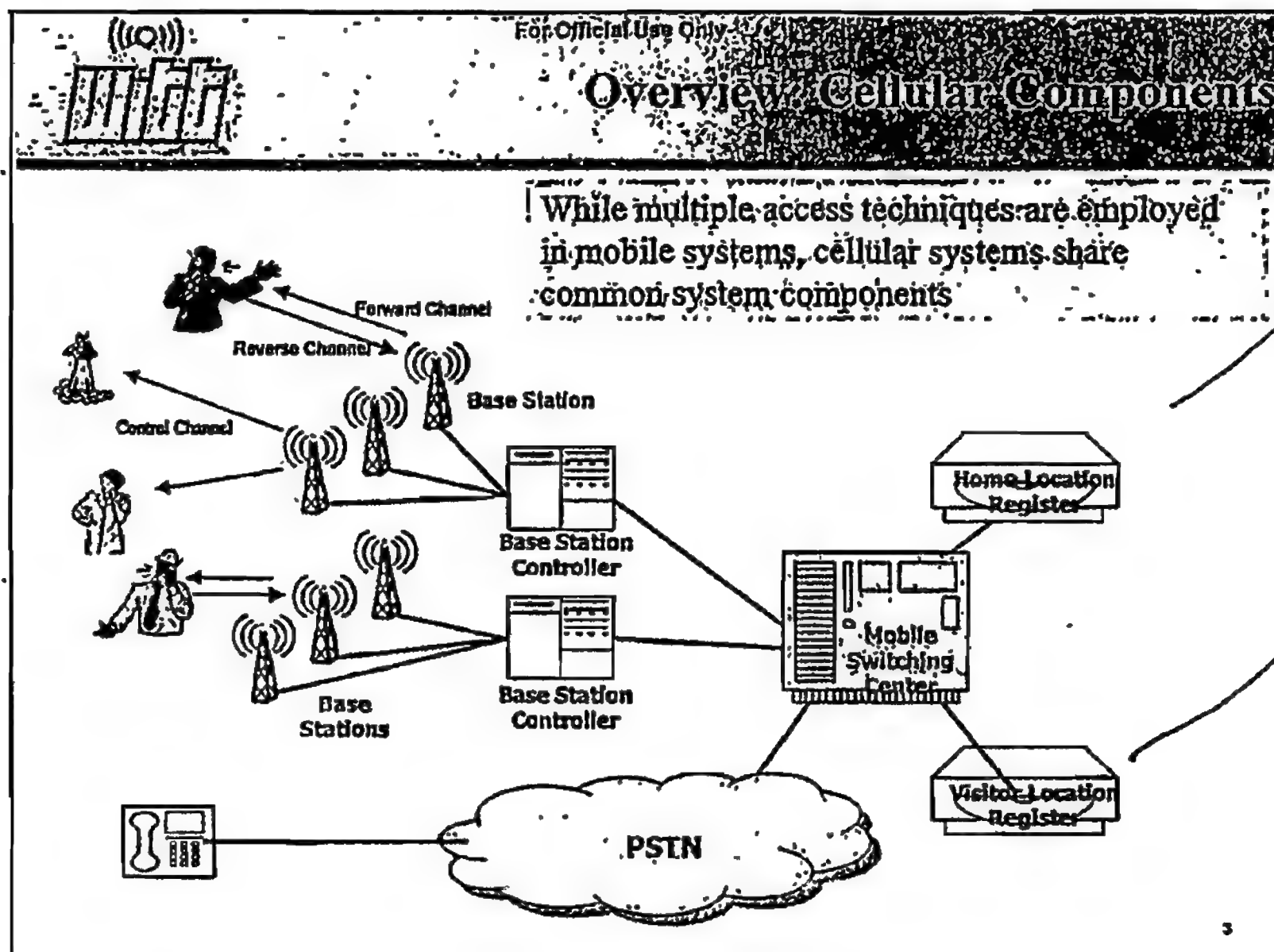
Overview: Cellular System Concept

- Cellular System allows the reuse of spectrum within a region by employing centrally connected base stations
- Each base station wirelessly connects to multiple mobiles within a designated geographic area (cell)
- Base stations connect to a Mobile Switching Center (MSC) and then to the Public Switched Telephone Network (PSTN)
- The system allows
 - Reuse of spectrum in regions, increasing the capacity of the system over a trunked radio system
 - Mobility of users in the system without loss of connectivity

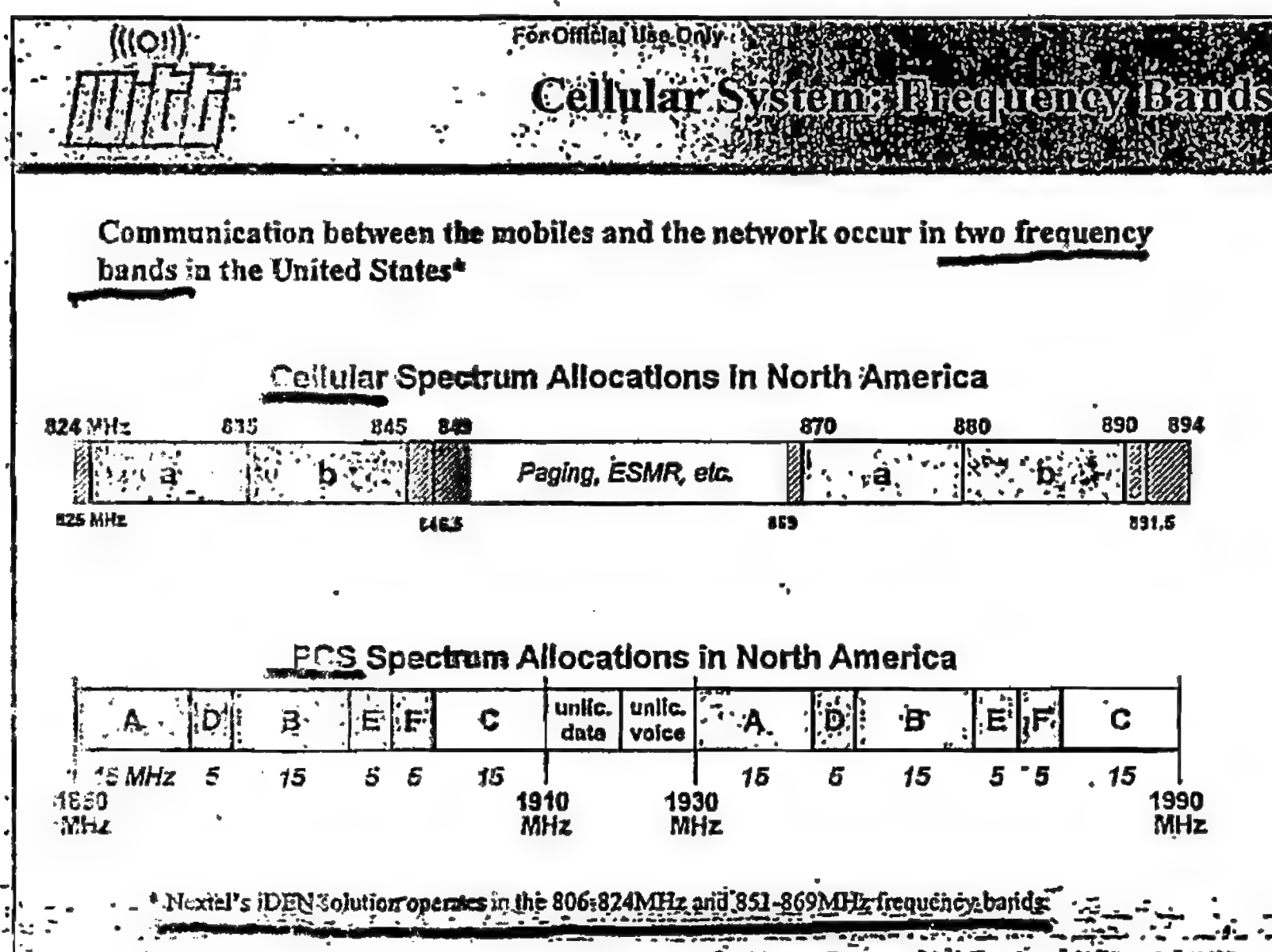


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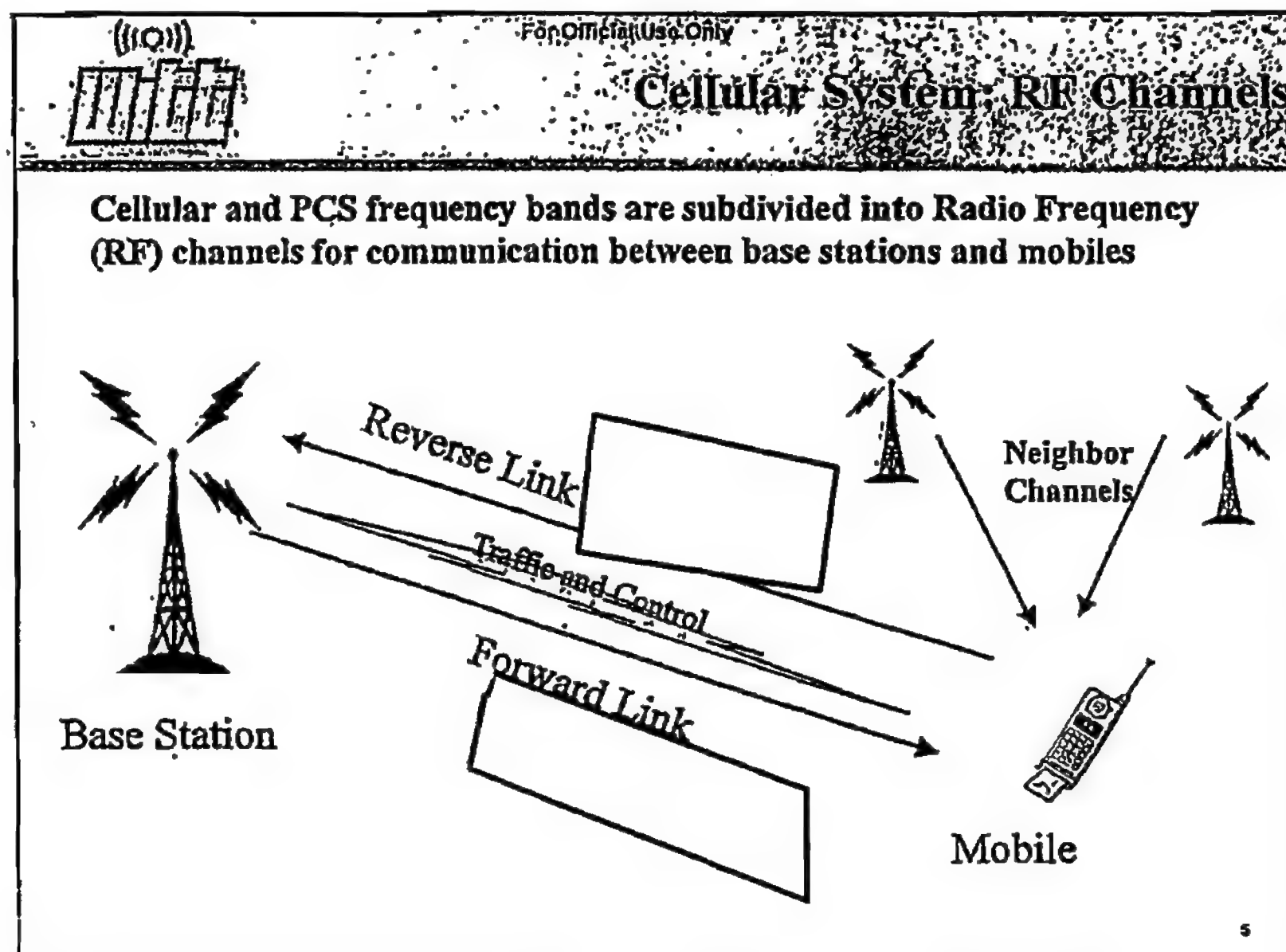
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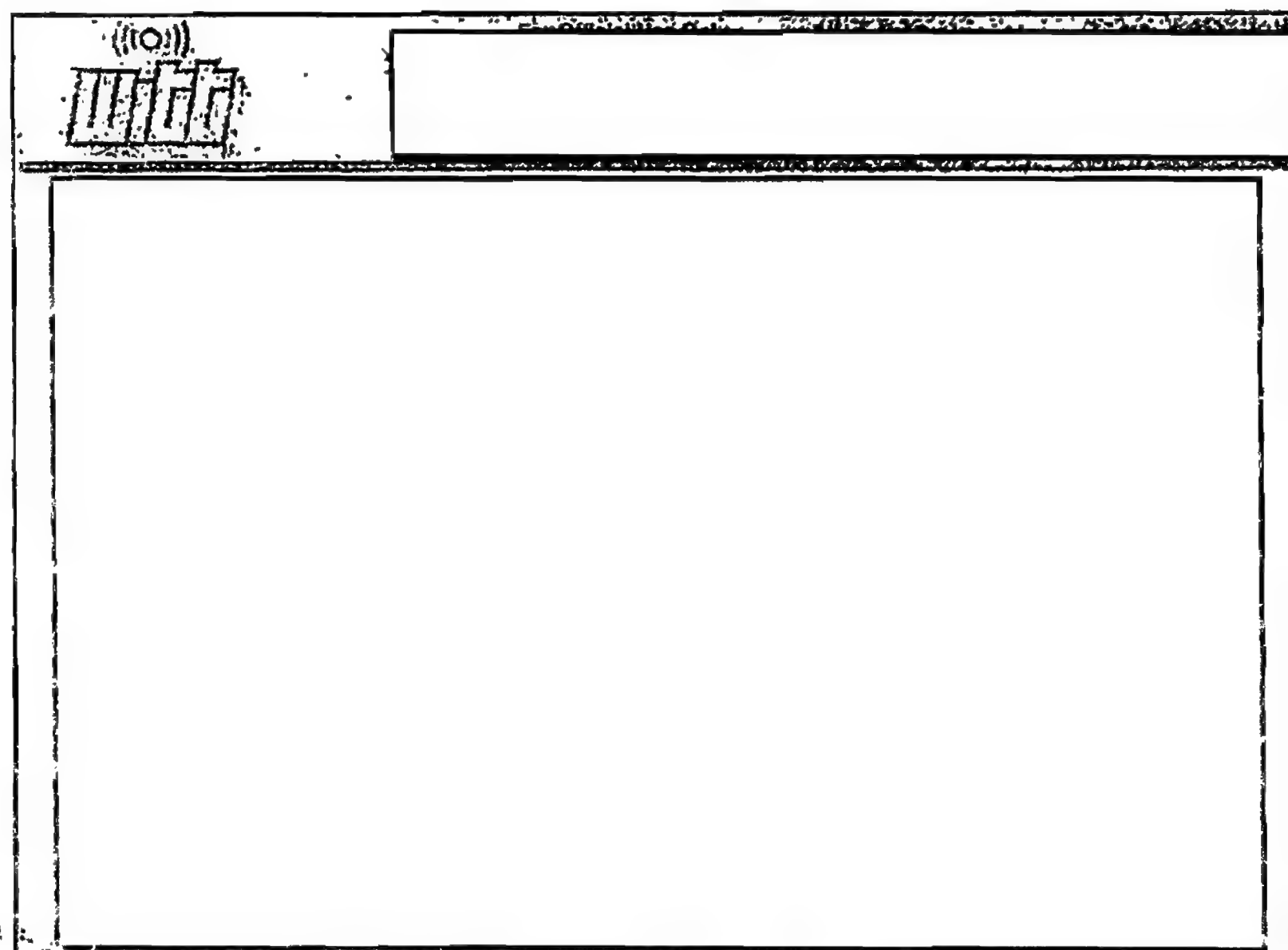
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Access Technologies

There are currently five cellular technologies in use in the U.S. market

- AMPS	(10% Market Share)
- TDMA (IS-136)	(20%* Market Share)
- GSM	(17% Market Share)
- CDMA	(46% Market Share)
- iDEN	(7% Market Share)

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* Carriers are converting TDMA systems to GSM

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AMPS (Advanced Mobile Phone Service)

- Background
 - Initial U.S. cellular system
 - Reached feasible system capacity limits in mid 90s
- Limitations
 - Provides basic voice service
 - No additional services: Digital Messaging, Location based services, etc.



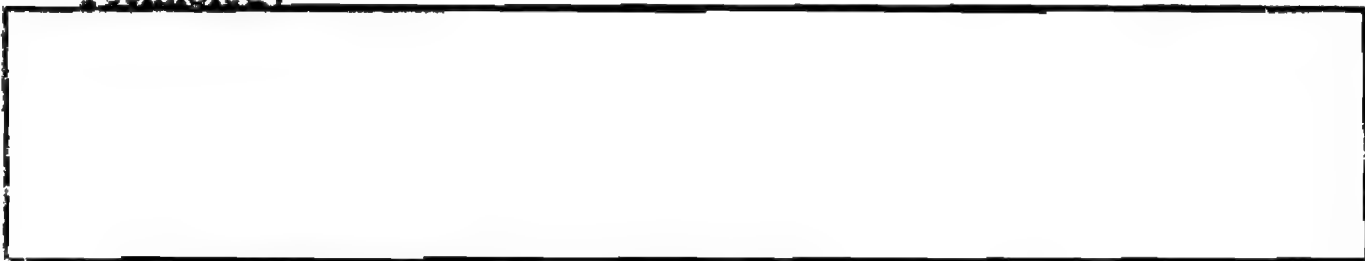
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TDMA (Time Division Multiple Access)

- Background
 - Technology was the first commercially available digital cellular technology in U.S.
 - Provides increased system capacity and advanced digital services
- Technology




- U.S. TDMA systems being replaced with GSM systems



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GSM (Global System for Mobile Communications)


- **Background**
 - Technology first introduced in Europe and migrated to the U.S.
 - Provides increased system capacity, advanced digital services and ability to offer seamless international mobile operation
- **Technology**
 - Multiplex users by assigning unique operating time slots in shared frequency channels
- GSM is the most widely adopted cellular technology in the world

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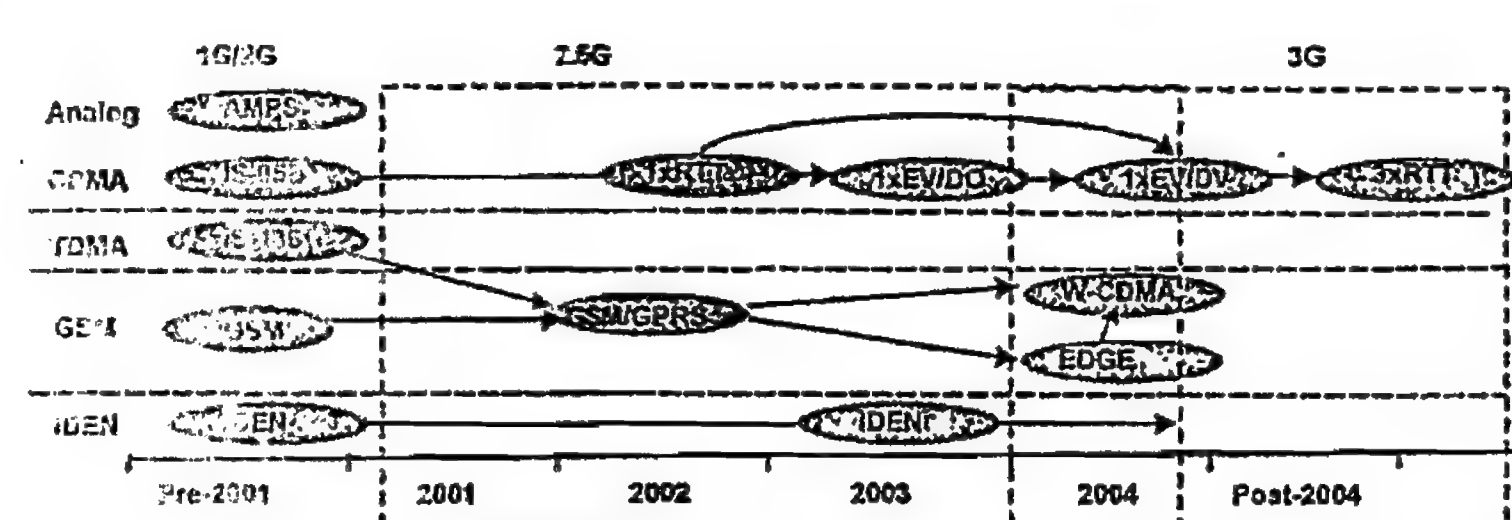
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General Trends

- CDMA and GSM phones will dominate near term U.S. market
 - 33 percent of the market (with conversion of IS-136 systems to GSM)
- 3G Systems will be CDMA based
- Carriers will continue to develop enhanced features



The diagram illustrates the timeline of mobile communication technologies. It is divided into three main sections: 1G/2G, 2.5G, and 3G. Technologies shown include Analog (AMPS), CDMA (IS-136, IS-95, EVDO), TDMA (IS-136, GSM, GPRS, EDGE), and IDEN (IS-136, IDEN). Arrows indicate the progression and convergence of these technologies over time.

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Loggerhead
Triggerfish

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LoggerHead [REDACTED]
Triggerfish Overview

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Introduction to [REDACTED]

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Goal – Learn operation of equipment in simulated case environment

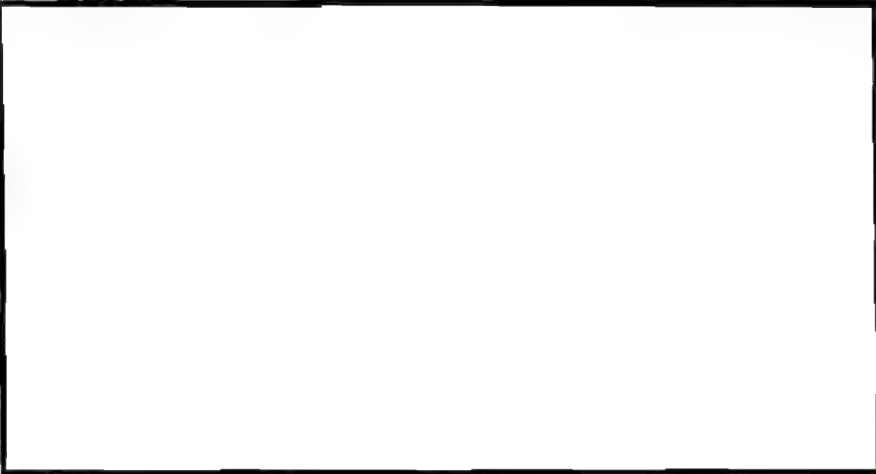

- Agenda
 - EQUIPMENT SET UP [REDACTED]
 - SCENARIO #1 [REDACTED]
 - SCENARIO #2 [REDACTED]
 - SCENARIO #3 [REDACTED]

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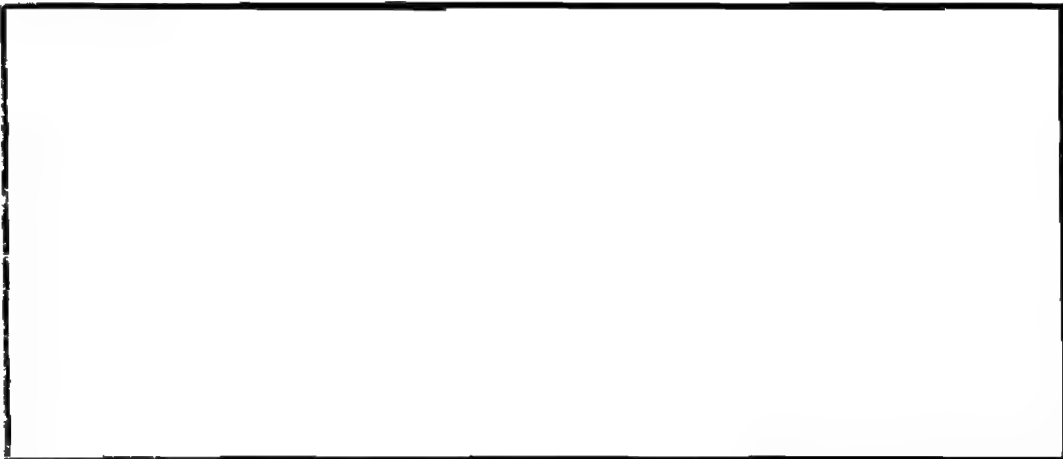

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(S) For Official Use Only Scenario #1

- Set up

- Location


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(S) For Official Use Only Scenario #2

- Set up

- Location


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Scenario #3

- Set up

- Location

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Introduction to [REDACTED]

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StingRay Function [REDACTED]

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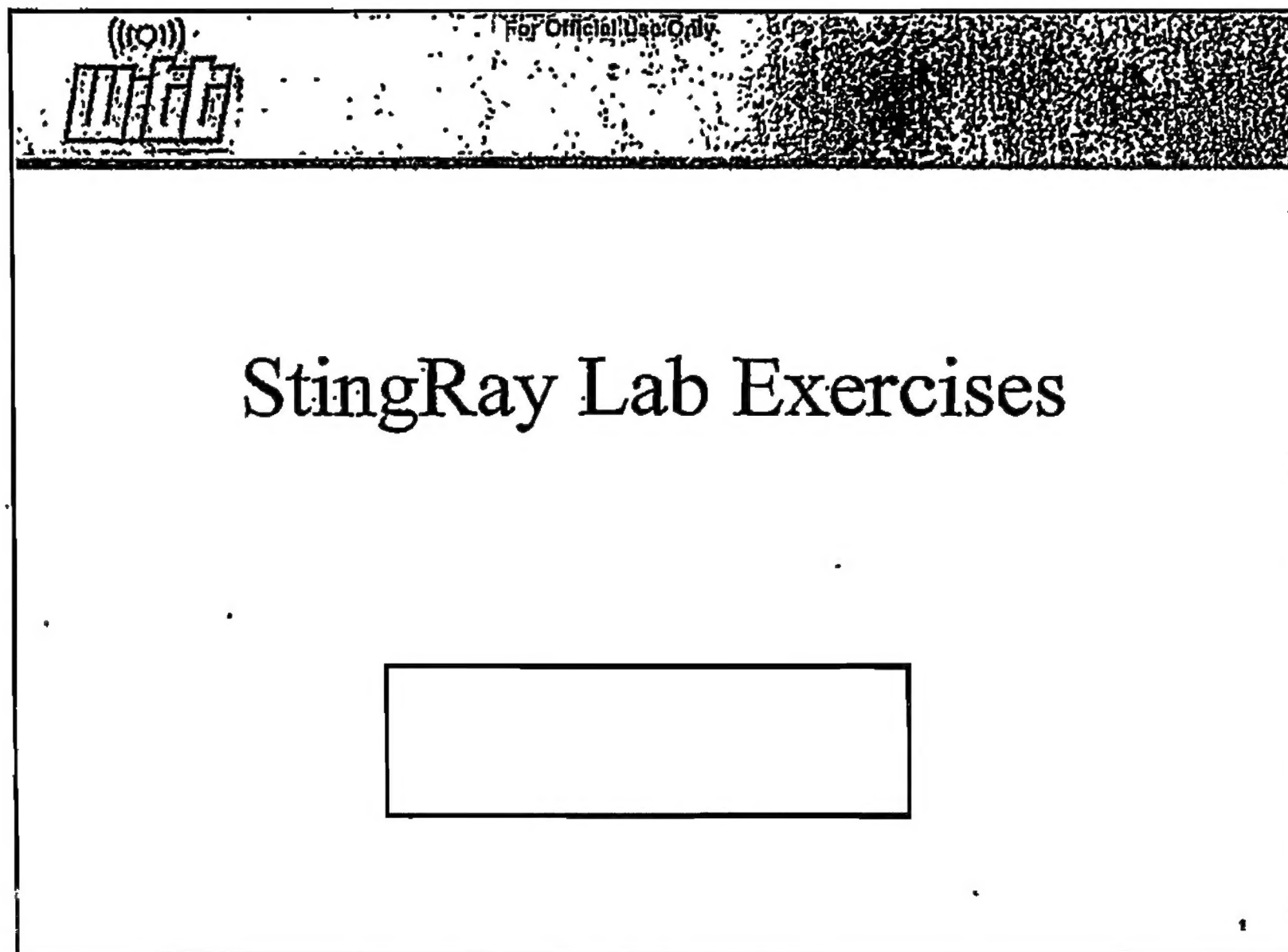
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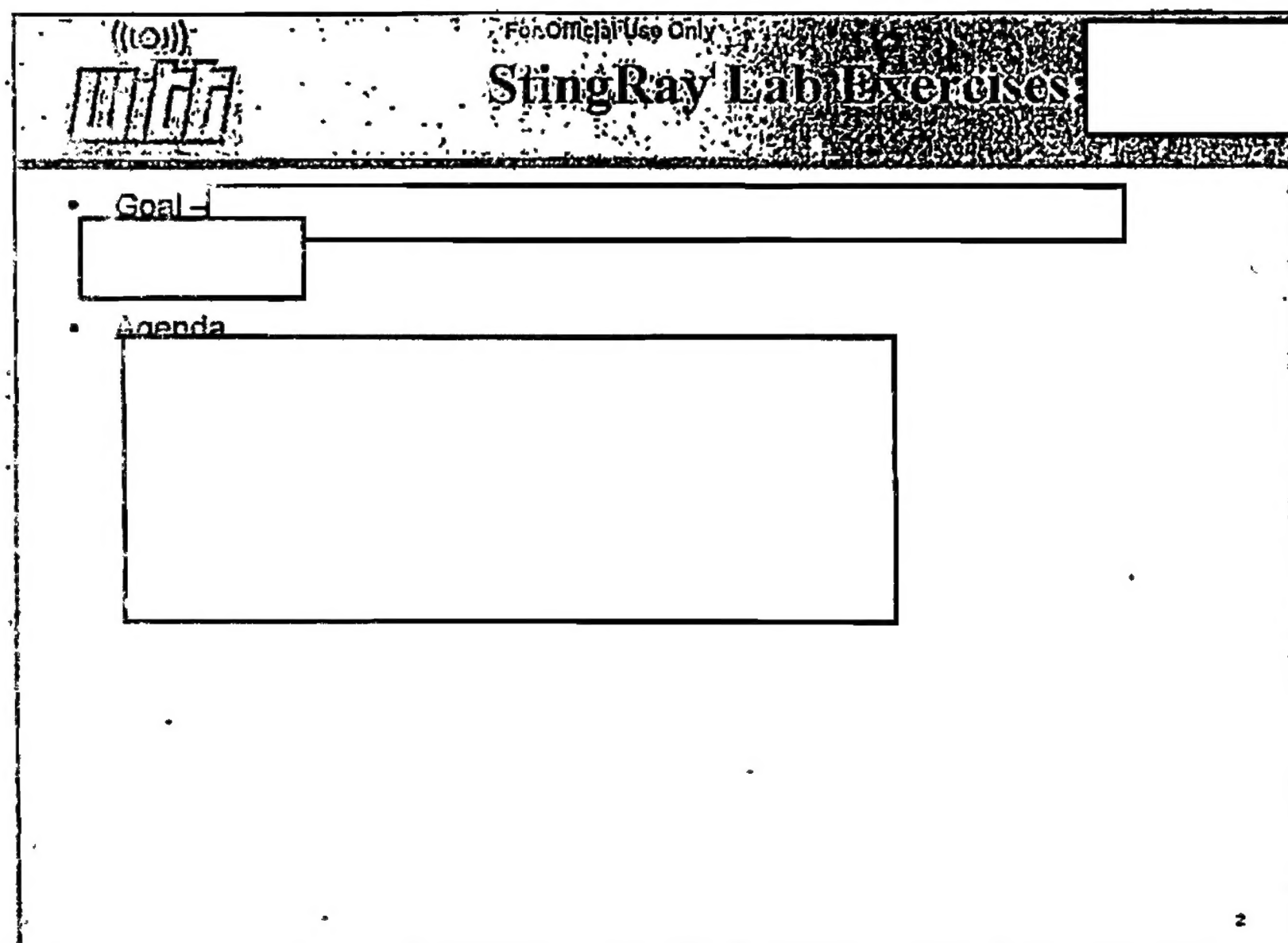
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StingRay Field Exercises

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Stingray Field Exercises [Redacted]

Goal - [Redacted]

- Agenda

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